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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/941,591

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Tatsuya Yamazaki

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EXAMINER

AGGARWAL, YOGESH K

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,591

Applicant(s)

YAMAZAKI, TATSUYA

Examiner

Yogesh K. Aggarwal

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 12-25 and 30-50 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 13-23, 31-37, 39, 40 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 7, 12, 24, 25, 30, 38, 41 and 43-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments with respect to claims 6, 7, 12, 24, 25, 30, 38, 41 and 43-50 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 6, 7, 12, 24, 25, 30, 38, 41 and 43-50 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzawa (US Patent # 5,617,176).

[Claim 6]

Matsuzawa et al. teaches a shake detecting sensor section (figures 6 and 12, element 11) containing a shake gyro type angular velocity sensor (19) for detecting an angular velocity in vibration of said apparatus (col. 20 lines 41-47). Matsuzawa also teaches a shake correcting section (24) inside a programming means (CPU 23) that corrects an image blur based on output of the shake detecting sensor section (col. 20 lines 53-59). Matsuzawa further teaches a limiting device (CPU 23) that limits a current input shake signal (x_0) by comparing it to a first differential amplification reference value Th_H (col. 23 lines 57-59, figure 13, step S14, read as a first predetermined value). If x_0 is larger than Th_H , the CPU 23 moves to step S16, and if it is lower than Th_H it moves to step S15 (col. 23 lines 59-64, figure 13). At step S15 CPU 23

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compares AD data x_0 with a second differential amplification reference value Th_L . If x_0 is smaller than Th_L , CPU 23 moves to step S20 to raise the reference voltage of the D/A converter 21 and if it greater than Th_L , the CPU 23 moves to step S24 (col. 23 line 65-col. 24 line 5) and therefore reads on in a case where an output of said vibration detection device which relates to an amplitude of the vibration is equal to or larger than a first predetermined value and is smaller than a second predetermined value limits a signal in accordance with the output by a first limit and in a case where the output is equal to or larger than the second predetermined value limits the signal in accordance with the output by a second limit. Matsuzawa does not teach before an integral processing. However Matsuzawa teaches in the prior art section that integrators are provided in HPF in order to minimize the time period of the initial unstable stages of the filter (col. 2 lines 56-63). Examiner notes that HPF arithmetic section 26 is provided as the last section of the CPU 23. Therefore output of the vibration detection device which relates to an amplitude of the vibration is before an integral processing.

Therefore taking the combined teachings of current embodiment and prior art of Matsuzawa, it would have been obvious to one skilled in the art at the time of the invention to have been motivated to have been output of the vibration detection device which relates to an amplitude of the vibration is before an integral processing in order to minimize the time period of the initial unstable stages of the filter as taught in Matsuzawa (col. 2 lines 56-63).

[Claims 7 and 12]

Matsuzawa teaches that a sensor of the type is used in a camera for the prevention of blur in images (col. 1 lines 6-10, col. 2 lines 33-34) which inherently senses the optical image and converts the optical image into an image signal. Matsuzawa teaches changes that take place in

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the outputs of a angular velocity sensor in the initial stages of activation (col. 1 lines 29-63, figure 18) and a HPF that removes the low frequency components in order to stabilize the output of sensor (col. 1 line 65-col. 2 line 13).

[Claim 24]

An apparatus adapted to a blur correction device (figure 12, shake correcting section 24) to correct an image blur based on an output of a vibration detection device (col. 20 lines 53-59), wherein said shake detecting sensor section (figures 6 and 12, element 11) containing a shake gyro type angular velocity sensor (19) for detecting an angular velocity in vibration of said apparatus (col. 20 lines 41-47), the apparatus comprising a limiting device (CPU 23) that limits a current input shake signal (x_0) by comparing it to a first differential amplification reference value Th_H (col. 23 lines 57-59, figure 13, step S14, read as a first predetermined value). If x_0 is larger than Th_H , the CPU 23 moves to step S16, and if it is lower than Th_H it moves to step S15 (col. 23 lines 59-64, figure 13). At step S15 CPU 23 compares AD data x_0 with a second differential amplification reference value Th_L . If x_0 is smaller than Th_L , CPU 23 moves to step S20 to raise the reference voltage of the D/A converter 21 and if it greater than Th_L , the CPU 23 moves to step S24 (col. 23 line 65-col. 24 line 5) and therefore reads on in a case where an output of said vibration detection device which relates to an amplitude of the vibration is equal to or larger than a first predetermined value and is smaller than a second predetermined value limits a signal in accordance with the output by a first limit and in a case where the output is equal to or larger than the second predetermined value limits the signal in accordance with the output by a second limit. Matsuzawa does not teach before an integral processing. However Matsuzawa teaches in the prior art section that integrators are provided in HPF in order to minimize the time

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period of the initial unstable stages of the filter (col. 2 lines 56-63). Examiner notes that HPF arithmetic section 26 is provided as the last section of the CPU 23. Therefore output of the vibration detection device which relates to an amplitude of the vibration is before an integral processing.

Therefore taking the combined teachings of current embodiment and prior art of Matsuzawa, it would have been obvious to one skilled in the art at the time of the invention to have been motivated to have been output of the vibration detection device which relates to an amplitude of the vibration is before an integral processing in order to minimize the time period of the initial unstable stages of the filter as taught in Matsuzawa (col. 2 lines 56-63).

[Claim 25]

See Claim 7.

[Claim 30]

See Claim 12.

[Claims 38 and 41]

Claims 38 and 41 are method and computer program storage claims corresponding to claim 24.

Therefore they have been analyzed and rejected based upon claim 24.

[Claims 43 and 45]

Matsuzawa teaches in figure 10(b), a first (Th_H) and second predetermined voltage (Th_L) are in accordance with sensor output which in turn changes with an image sensing time for sensing an object (col. 15 lines 25-45).

[Claims 47 and 49]

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Claims 47 and 49 are method and computer program storage claims corresponding to claim 43.

Therefore they have been analyzed and rejected based upon claim 43.

[Claims 44 and 46]

Matsuzawa teaches that the apparatus may be so arranged that the stability of the shake signal sent out of the differential amplifying section 12 is determined from the frequency of alteration of the reference voltage and the shake signal output specifying section 16 is made to send out a shake signal output specifying signal to initiate the operation of the shake signal correcting section 15 and the HPF arithmetic section 17 (col. 18 lines 37-44).

[Claims 48 and 50]

Claims 48 and 50 are method and computer program storage claims corresponding to claim 44.

Therefore they have been analyzed and rejected based upon claim 44.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K. Aggarwal whose telephone number is (571) 272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.

5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA
August 4, 2005



DAVID L. OMETZ
SUPERVISORY PATENT
EXAMINER